APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/388,804	09/01/1999	PETE N. MOORE	81862.P157	4456

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD, SEVENTH FLOOR
LOS ANGELES, CA 90025

EXAMINER
LY, ANH VU H

ART UNIT	PAPER NUMBER
2667	8

DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.</td><td>Applicant(s)</td></tr>
<tr><td>09/388,804</td><td rowspan="3">MOORE, PETE N.</td></tr>
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	Application No.		**Applicant(s)**
Office Action Summary	09/388,804		MOORE, PETE N.
	Examiner		**Art Unit**
	Anh-Vu H Ly		2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Response to Amendment

1.   This communication is in response to applicant's amendment filed September 17, 2003.

The proposed amendment to the claims has been entered. Claims 1-23 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-3, 5-10, 12-14, 16-20, and 22-23 are rejected under 35 U.S.C. 102(e) as being

anticipated by Putcha et al (US Pub 2003/0198241 A1). Hereinafter, referred to as Putcha.

 With respect to claims 1, 9, and 12, Putcha discloses in Fig. 1, a computer network

(WAN) comprising an ATM network 10, private networks 20, 40, 60 and a public network 55.

ATM network 10 includes network switches 12, 14, and 16. ATM switches 12, 14, and 16

connect to private networks 20, 40, and 60 (LAN) (a method, comprising controlling utilization

of a router resource at the interface between a first number of LAN ports and a second number of

WAN links). Putcha discloses in paragraph 62 that the buffer sizing parameter defines the

number of buffer units needed by each connection, i.e., for IP, this parameter may be based on a

packet size (LAN ports providing packets of data having a plurality of sizes). Putcha discloses in

paragraphs 64-65, a method of allocating buffers (switching capacity) based on the utilization of

the output ports, such as the ports line speed (bundles of WAN links) for each connection (the

utilization by each LAN port being controlled according to the bandwidth availability of

corresponding bundles of the WAN links assigned to each of the LAN ports and a switching

capacity of the router resource).

With respect to claims 2, 7, 13, and 18, Putcha discloses in Fig. 4a, a high level flow

diagram of an adaptive buffer management algorithm for allocating buffers (switching capacity)

to the received data within the maximum available buffers of the switch (wherein individual ones

of the LAN ports are permitted to exceed their fair share of the switching capacity of the router

resource if a current switching load due to traffic from all of the LAN ports is less than a

maximum switching capacity of the router resource).

With respect to claims 3, 10, 14, and 20, Putcha discloses in Fig. 4, a method of

allocating buffer to the received data only if the extra buffers are available from other ports (a

current switching load due to traffice from all of the LAN ports is equal to a maximum switching

capacity of the router resource then those of the LAN ports that are attempting to utilize more

than their fair share of the bandwidth availability or the switching capacity are throttled back).

With respect to claims 5-6, 8, 16-17, and 19, Putcha discloses in paragraph 71, prior to

allocating buffers (switching capacity), CAC decides if a new connection can be accepted based

on the attributes of both the requested connection and the existing connection. When adaptive

buffering is performed, for each port, the buffer allocator determines the zone, i.e., the port

utilization, and the metric value. The zone and the metric value for each port are calculated

based on the port line speed, aggregate PCR, aggregate SCR for all connections using that port (a

method, comprising determining, at an entry port of a router resource, whether or not to admit

inbound traffic according to a fair allocation distribution scheme that allows traffic to be

admitted according to bandwidth availability of a corresponding exit point for the traffic and a

current utilization of total switching capacity of the router resource).

With respect to claims 22-23, Putcha discloses in Fig. 1, a computer network

implementing the adaptive buffer allocation. Therefore, instructions regarding the adaptive

buffer allocation are stored in the memory of the switches or routers (sequences of instructions is

embodied on one of a floppy disk and a CD-ROM and in the form of electrical signals

transported through a communication medium).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claims 4, 11, 15, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Putcha et al (US Pub 2003/0198241 A1).

With respect to claims 4, 11, 15 and 21, Putcha discloses in Figs. 4-4A, a method for

allocating buffers for data transmission in a network communication device. Putcha does not

disclose the step of dropping packets inbound on a port at the packet's entry point to the router

resource when throttling back is implemented. However, method of dropping packets at the entry point of the switch is well known in the art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the feature of dropping packets at the entry point of the switch in Putcha's system, to prevent the switch from overloaded.

Response to Arguments

4.   Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bonomi et al (US Patent No. 5,838,681) discloses dynamic allocation of port bandwidth in high-speed packet switched digital switching systems.
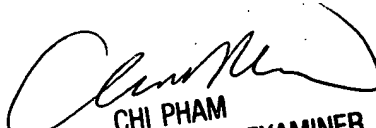
6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 703-306-5675. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

avl

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600, 12/11/03